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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,874	12/26/2001	Tonny Chen	BHT-3204-16	7559
7590	04/08/2004	EXAMINER		
BRUCE H. TROXELL SUITE 1404 5205 LEESBURG PIKE FALLS CHURCH, VA 22041			LE, DUY K	
ART UNIT		PAPER NUMBER		2
2685				
DATE MAILED: 04/08/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/025,874	CHEN, TONNY
	Examiner	Art Unit
	Duy K Le	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Chennakeshu et al. (U.S. Patent 6,532,374).

As to claim 1, Figures 3 and 7-10 in Chennakeshu show a hand-free device equipped with expansion function modules (40) comprising a hand-free main body (100) and at least one connection unit (150) for connecting at least one expansion function module, wherein:

the hand-free main body (100) includes a module detection and control unit (106) for detecting external variations of the expansion function module and controlling the expansion function module, and providing signals to a central processing unit, and through a signal switch unit (152) to perform signal switching for the connected different expansion function modules (see Col. 6, lines 13-32); and

the expansion function module (40 in Figure 3) includes at least: a control unit (40) for controlling and coordinating operations of the expansion function module and outputting signals, and coordinating operations of the hand-free main body (see Col. 4, lines 30-35);

a coding/decoding unit (54) for matching operations and coordination of the signal switch unit of the hand-free main body ("a modem 54 contained within the control unit 40 provides a communications link between the control unit 40 and the base unit 20" (Col. 4, lines 47-49));

an input unit (54) serving as an input end for linking to the connection unit of the hand-free main body ("a modem 54 contained within the control unit 40 provides a communications link between the control unit 40 and the base unit 20" (Col. 4, lines 47-49));

an output unit (46, 48, 50) serving as an output end to output information of the expansion function module ("the display 45 is used to display information, such as the number dialed and call status information, to the user. Microphone 48 converts the user's voice into audio signals which are to be transmitted by the base unit 20 to a remote station located outside the vehicle. The speaker 50 converts audio signals received by the base unit 20 into audible sounds which can be heard by the user" (Col. 4, lines 38-44)); and

an expansion function unit (52) containing preset expansion function data ("control logic 52 controls the operation of the control unit 40 according to instructions stored in its internal memory" (Col. 4, lines 45-47)).

As to claim 2, the Chennakeshu reference discloses the hand-free device equipped with expansion function modules of claim 1, wherein the input unit is a signal line ("a modem 54 contained within the control unit 40 provides a communications link between the control unit 40 and the base unit 20" (Col. 4, lines 47-49)).

As to claim 3, the Chennakeshu reference discloses the hand free device equipped with expansion function modules of claim 1, wherein the input unit is a human machine interface ("the control unit 40 includes a keypad 44, display 46, microphone 48, and speaker 45 which

serves as the interface elements between the user and the base unit 20. The keypad 44 is used to enter data and commands by the user" (Col. 4, lines 32-36)).

As to claim 4, the Chennakeshu reference discloses the hand-free device equipped with expansion function modules of claim 1, wherein the output unit is a display device ("the display 45 is used to display information, such as the number dialed and call status information, to the user" (Col. 4, lines 38-40)).

As to claim 5, the Chennakeshu reference discloses the hand-free device equipped with expansion function modules of claim 1, wherein the output unit is a signal line ("microphone 48 converts the user's voice into audio signals which are to be transmitted by the base unit 20 to a remote station located outside the vehicle" (Col. 4, lines 40-43)).

As to claim 7, the Chennakeshu reference (Figure 10) discloses the hand-free device equipped with expansion function modules (204, 206, 208, 210, 212, 214, 60, 40) of claim 1, wherein the preset expansion function data contained in the expansion function unit are selectively for GPS, audio control, or car phone (see Col. 6, line 50 to Col. 7, line 7).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,532,374 to Chennakeshu et al. in view of Gong (U.S. Patent 6,301,491).

As to claim 6, the Chennakeshu reference discloses the hand-free device equipped with expansion function modules of claim 1. It further discloses "the display 45 is used to display information, such as the number dialed and call status information, to the user" (Col. 4, lines 38-40). However, it does not expressly disclose the output unit is a LCD. The Gong reference teaches the output unit is a LCD ("a displaying unit such as a LCD (liquid crystal display) can be used for a display 160 for displaying the state of the radio terminal and the progressing state of a program being executed by the controller 100" (Col. 3, lines 7-10)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Chennakeshu wherein the output unit is a LCD, as taught by Gong, in order to display the state of the radio terminal.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,532,374 to Chennakeshu et al. in view of Ditzik (U.S. Patent 5,983,073) and further in view of Chen (U.S. Patent 6,266,543).

As to claim 8, the Chennakeshu reference discloses the hand-free device equipped with expansion function modules of claim 7, wherein the preset expansion function data contained in the expansion function unit are for car phone function, and the expansion function unit including a power supply management unit for controlling power supply for the expansion function module ("modem adapter 150" in Col. 6, lines 13-22). However, the Chennakeshu reference does not disclose a GSM module unit for matching communication modules of mobile phone chips, and a DTMF unit to allow the expansion function unit dialing telephone through audio frequency.

The Ditzik reference teaches a GSM module unit for matching communication modules of mobile phone chips ("wireless communications adapters or modems disclosed in the above embodiments may consist of analog or digital transmitter and receivers, having control circuitry for cellular AMPS, PCS, CDPD, and RF links to wide area communication networks" (Col. 11, lines 37-41). "Communication techniques may include several types of digital multiplexing and command access schemes such as TDMA, CDMA, GSM, or a combination thereof" (Col. 11, lines 43-46)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Chennakeshu to comprise a GSM module unit for matching communication modules of mobile phone chips, as taught by Ditzik, in order to support different communications techniques, methods, and equipment.

However, Chennakeshu-Ditzik does not disclose a DTMF unit to allow the expansion function unit dialing telephone through audio frequency. The Chen reference teaches a DTMF unit to allow the expansion function unit dialing telephone through audio frequency ("an additional DTMF generator 39 in cooperation with a near-end sound input 30 which produces dialing tone representing number" (Col. 3, lines 47-49). See also Figure 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Chennakeshu-Ditzik to comprise a DTMF unit to allow the expansion function unit dialing telephone through audio frequency, as taught by Chen, in order to support hands-free automatically dialing out a selected phone number.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Stern et al. (U.S. Patent 6,266,542) discloses accessory allowing hands-free operation of a cellular telephone.
- b. Kim et al. (U.S. Patent 6,226,532) discloses cellular telephone with voice dialing function.
- c. Johansson (U.S. Patent 5,913,163) discloses integrated local communication system.
- d. Lucey (U.S. Patent 4,490,584) discloses infrared remote telephone system level control.
- e. Chun et al. (U.S. Patent 6,366,649) discloses method and apparatus for managing voice registration entries of voice recognition apparatus for use in both handset and hands-free kit.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Duy Le  
April 1, 2004

  
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